ICT - INSTITUTE OF EARTH SCIENCES

Graduate Research Scholarship - 1 vacancy

Ref. MOSIPO

January 03, 2023

A call for tenders is open for one Research Scholarship for Graduate within the scope of the project MOSIPO - *Otimização do processo de pintura automóvel pelo desenvolvimento de modelos de simulação numéricos CFD e ANN e de um modelo de gestão integrado*, with reference POCI-01-0247-FEDER-072621, financed by the P2020 program through the *Sistema de Incentivos à Investigação e Desenvolvimento Tecnológico (SII&DT)*, under the following conditions:

Scientific area: Mechanical Engineering – Thermofluids and Energy

Admission requirements:

1. Mandatory requirements
   1.1. Degree in Mechanical Engineering, Renewable Energy Engineering or in related areas;
2. Preferential requirements
   2.1. Participation in research projects;
   2.2. Training or relevant knowledge in Computational Methods, Computational Fluid Dynamics and programming;
   2.3. Experience in using software for geometric modeling, mesh generation and Computational Fluid Dynamics (preferably ANSYS FLUENT);
   2.4. Knowledge of chemistry and chemical kinetics;
   2.5. Knowledge of programming languages such as Fortran, C++ and Matlab;
3. Skills
   3.1. Spoken and written communication skills in Portuguese and English;
   3.2. Ability to work in a team;
   3.3. Responsibility;
   3.4. Organizational skills and dynamism.

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates for "**BI**" (Research Grants) must comply as a rule condition for the award of the scholarship, the effective inclusion in study cycles leading to the attribution of academic degrees or in courses not leading to an academic degree. Courses that do not confer an academic degree correspond to the courses provided for in subparagraph e) of paragraph 3 of article 4 of

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Decree-Law No. 74/2006 of 24 March and must be developed in a higher education institution in association with at least one R&D unit, including a course plan in one or several research areas of the unit.

Work plan:

1. Adaptation of the Computational Fluid Dynamics model of a VOC incinerator to model the total or partial replacement of natural gas by hydrogen;

2. Assessment of the impacts of replacing natural gas with hydrogen on the peripheral equipment operation and CO2 emissions.

Applicable legislation and regulations: The granting of the Research Scholarship will be carried out upon the signing of a contract between the University of Évora and the scholarship holder, as set in the template https://www.fct.pt/apoios/Minuta_Contrato_Bolsa.docx , pursuant to the Research Scholarship Statute (Law No. 40/2004 of August 18 and Decree-Law No. 123/2019 of August 28) and in accordance with the legislation and Regulation of Research Grants of the Foundation for Science and Technology, IP in force, regulation nº950/2019 of December 16, 2019: https://www.fct.pt/apoios/bolsas/regulamento.phtml.pt and other applicable rules.

Place of work: The work will be developed at Institute of Earth Sciences of the University of Évora, under the scientific supervision of the Professor Isabel Malico.

Duration of the scholarship(s): The scholarship will have a duration of 5 months, starting on February of 2023. The scholarship contract may be renewed up to the end of the funding project's budget allocation.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to € 875,98, according to the table of scholarships awarded directly by FCT, I.P. in Portugal (http://fct.pt/apoios/bolsas/valores), payments being made monthly, by check or bank transfer.

Selection methods: The selection method to be used will be the curriculum evaluation, expressed on a scale of 0 to 20 values, with the valuation: Curriculum evaluation – 100%.

Composition of the Selection Jury:

President: Professor Paulo Canhoto
1th Effective Member: Professor Isabel Malico
2nd Effective Member: Professor Rui Salgado
1th Alternate Member: Professor Eugénio Garção
2nd Alternate Member: Professor Gonçalo Silva

Advertising/notification of results: The final results of the evaluation will be publicized, through an ordered list by final grade obtained posted in a visible and public place of the Institute of Earth Sciences, being the candidate approved notified through email.

To ensure the right of prior hearing of interested parties, the Final Classification project will be announced by any written means to all interested parties.

After communicating the provisional list of the results of the evaluation, candidates have a period of 10 working days to express their opinion in a preliminary hearing of interested parties.

Application deadline and submission of applications: The tender is open from 10th January of 2023 to 24th January of 2023 and the results of the selection will be published by 27th of January of 2023.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: Curriculum Vitae, certificate of qualifications and other supporting documents or certificates considered relevant.

For the purposes of application, the evidence may be replaced by a declaration of honor signed by the candidate, but the failure to demonstrate that evidence, in the contracting phase, possession of the required degree on the deadline for application or the non-presentation of proof of enrollment in the study cycle or non-degree course, for scholarships with this component, imply the cancellation of the candidate's application.

Academic degrees obtained in foreign countries require registration by a Portuguese Institution in accordance with Decree-Law no. 66/2018, of August 16 and Ordinance No. 33/2019, of January 25th.

The presentation of the certificate is mandatory for the signing of the contract. More information can be obtained at: https://www.dges.gov.pt/pt/pagina/recognition?plid=374

Applications must be sent by email to:

Prof. Paulo Canhoto
Institute of Earth Sciences of the University of Évora
email: canhoto@uevora.pt

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